

This listing of claims will replace all prior versions, and listings, of claims in the application:

II. Listing of Claims

Claim 1 (Original): An impulse therapy garment for use in pump therapy for enhancing venous and arterial blood flow, the garment comprising:

a fabric comprising a length sufficient to wrap around an arch and dorsum of a foot along a path perpendicular to a length of the foot, and comprising a width substantially coextensive with a span between the ball and heel of the foot;

an inflatable bladder coupled to the fabric and configured to press against the arch of the foot when inflated, the inflation further configured to direct a force against the dorsum of the foot; and

a heel strap configured to be positioned around the back of the heel, and having a first end pivotally coupled proximate to the fabric at a first location when the fabric is wrapped around the foot and a second end coupled proximate to the outer surface of the fabric at a second location.

Claim 2 (Original): A garment according to claim 1, wherein the first end of the heel strap is pivotally coupled about a stem of an inflation port coupled to the bladder and configured to pass air into the bladder.

Claim 3 (Original): A garment according to claim 2, wherein the first end comprises a hole therethrough configured to receive a stem of the inflation port.

Claim 4 (Original): A garment according to claim 3, wherein the stem comprises port protrusions about its external surface for engaging with a stop protrusion located on an inside diameter of the hole, the port protrusions and the stop protrusion engaging to limit the pivot of the first end about the stem.

Claim 5 (Original): A garment according to claim 3, wherein the first end further comprises a reinforcement area surrounding the hole.

Claim 6 (Original): A garment according to claim 1, wherein the heel strap is configured to pivot up to about 180° with respect to the fabric, the garment configurable for use on a left or right foot based on the 180° pivot.

Claim 7 (Original): A garment according to claim 1, wherein the heel strap is configured to pivot up to about 45° with respect to the fabric to provide vertical adjustment along the back of the heel.

Claim 8 (Original): A garment according to claim 1, wherein the second end of the heel strap is removeably coupled to the outer surface of the fabric using a hook-and-loop fastener, wherein a hook portion of the fastener is on the second end and a loop portion of the fastener is on the outer surface of the fabric.

Claim 9 (Original): A garment according to claim 1, further comprising a resilient shank member having a length substantially coextensive with the width of the fabric and a width substantially coextensive with a width of the foot, the shank member coupled to the fabric at a location sufficient to substantially lap the span.

Claim 10 (Original): A garment according to claim 9, wherein the shank member is an inner shank, the garment further comprising an outer shank located over an outer surface of the fabric opposite the inner shank, and having a length and a width coextensive with the length and width of the inner shank.

Claim 11 (Original): A garment according to claim 9, wherein the bladder comprises a width substantially coextensive with the length of the shank member and a length extending along a portion of the length of the fabric across the width of the shank member to an end of the fabric.

Claim 12 (Original): A garment according to claim 1, wherein the fabric further comprises at least one dorsum strap extending along the length of the fabric from an end thereof and

configured to removeably attach to an outer surface of the fabric for securing the garment around the foot.

Claim 13 (Currently Amended): An impulse therapy garment for use in pump therapy for enhancing venous and arterial blood flow of a human foot, the garment comprising:

a fabric comprising a length sufficient to wrap around an arch and dorsum of a foot along a path perpendicular to a length of the foot, and comprising a width substantially coextensive with a span between the ball and heel of the foot;

an inflatable bladder coupled to the fabric and configured to press against the arch of the foot when inflated, the inflation further configured to direct a force against the dorsum of the foot; and

a bladder retention fastener configured to retain an end of the bladder to the fabric to allow substantially differential movement between the fabric and non-retained portions of the bladder during inflation and deflation of the bladder, **the fastener comprising:**

a flexible clip having opposing coupling mechanisms on opposing ends thereof, one coupling mechanism coupled to the end of the bladder and the other coupling mechanism coupled to a skin-side surface of the fabric, the flexible clip capable of flexing during inflation and deflation of the bladder.

Claim 14 (Canceled)

Claim 15 (Original): A garment according to claim 13, wherein the bladder retention means comprises a resilient bladder layer formed along at least one side of the bladder and configured to resist folding.

Claim 16 (Original): A garment according to claim 15, wherein the resilient bladder layer comprises a foam layer.

Claim 17 (Original): A garment according to claim 13, wherein the bladder retention means comprises a fastener having a receptacle and a plug, the receptacle configured to receive the plug therein, and wherein one of the plug or receptacle is associated with the bladder and the other is associated with the fabric.

Claim 18 (Original): A garment according to claim 13, further comprising a resilient shank member having a length substantially coextensive with the width of the fabric and a width substantially coextensive with a width of the foot, the shank member coupled to the fabric at a location sufficient to substantially lap the span.

Claim 19 (Original): A garment according to claim 18, wherein the bladder comprises a width substantially coextensive with the length of the shank member and a length extending along a portion of the length of the fabric across the width of the shank member to an end of the fabric.

Claim 20 (Original): A garment according to claim 13, further comprising a heel strap configured to be positioned around a back of the foot and having opposing ends of the heel strap coupled proximate to the outer surface of the fabric at respective locations when the fabric is wrapped around the foot.

Claim 21 (Original): An impulse therapy garment for use in pump therapy for enhancing venous and arterial blood flow of a human foot, the garment comprising:

- a fabric comprising a length sufficient to wrap around an arch and dorsum of a foot along a path perpendicular to a length of the foot, and comprising a width substantially coextensive with a span between the ball and heel of the foot;

- an inflatable bladder coupled to the fabric and configured to press against the arch of the foot when inflated, the inflation further configured to direct a force against the dorsum of the foot; and

- an air connector hermetically coupled over a stem of an inflation port, wherein the port is coupled to the bladder and configured to pass air to and from the bladder, the air connector configured to rotate about the stem to orient a hose opening located on a side of the air connector substantially perpendicular to a length of the stem.

Claim 22 (Original): A garment according to claim 21, the air connector comprising an inner bore surface locatable around the stem and further comprising a protrusion feature on the inner bore surface, the stem having an annular port stop feature about its external surface configured to receive the protrusion feature therebetween to provide positive stops for the rotation of the air connector about the stem.

Claim 23 (Original): A garment according to claim 21, the air connector further comprising an annular groove on an inner bore surface locatable around the stem, and the stem further comprising an annular protrusion about its external surface configured to receive the annular protrusion when the air connector is located over the stem, the engagement of the annular protrusion within the annular groove coupling the air connector to the port while allowing rotation of the air connector about the stem.

Claim 24 (Original): A garment according to claim 21, wherein the air connector is configured to rotate 360° about the stem.

Claim 25 (Original): A garment according to claim 21, wherein the fabric is forcibly retained between the air connector and a flange portion of the port when the air connector is hermetically coupled over the stem.

Claim 26 (Original): A garment according to claim 21, wherein the stem of the port comprises an annular lip seal on an end thereof adapted to hermetically engage an inner bore surface of the air connector when the air connector is hermetically coupled over the stem, the engagement of the annular lip seal and the inner bore surface providing a seal between the air connector and the port while allowing rotation of the air connector about the stem.

Claim 27 (Original): A garment according to claim 21, wherein an internal gallery of the air connector comprises smooth surface curvatures throughout.

Claim 28 (Original): A garment according to claim 21, further comprising a resilient shank member having a length substantially coextensive with the width of the fabric and a width substantially coextensive with a width of the foot, the shank member coupled to the fabric at a location sufficient to substantially lap the span.

Claim 29 (Original): A garment according to claim 28, wherein the bladder comprises a width substantially coextensive with the length of the shank member and a length extending along a portion of the length of the fabric across the width of the shank member to an end of the fabric.

Claim 30 (Original): A garment according to claim 21, further comprising a heel strap configured to be positioned around a back of the foot, wherein at least one end of the heel strap is pivotally coupled between the air connector and inflation port about the stem and configured to rotate about the stem independent of the rotation of the air connector.

Claim 31 (Currently Amended): An impulse therapy garment for use in pump therapy for enhancing venous and arterial blood flow, the garment comprising:

a fabric comprising a length sufficient to wrap around an arch and dorsum of a foot along a path perpendicular to a length of the foot, and comprising a width substantially coextensive with a span between the ball and heel of the foot;

an inflatable bladder coupled to the fabric and configured to press against the arch of the foot when inflated, the inflation further configured to direct a force against the dorsum of the foot; **and**

a plurality of dorsum straps extending from one end of the fabric, each of the plurality configured to removeably attach to an outer surface of the fabric in independent locations to provide differential adjustment when securing the garment around the foot; **and**

a resilient shank member having a length substantially coextensive with the width of the fabric and a width substantially coextensive with a width of the foot, the shank member coupled to the fabric at a location sufficient to substantially lap the span.

Claim 32 (Original): A garment according to claim 31, wherein fastening ends of the dorsum straps are removeably coupled to the outer surface of the fabric using hood-and-loop fasteners, wherein hook portions are on the fastening ends and loop portions are on the outer surface of the fabric.

Claim 33 (Original): A garment according to claim 31, wherein the plurality of dorsum straps comprises two dorsum straps.

Claim 34 (Original): A garment according to claim 31, further comprising a heel strap configured to be positioned around a back of the foot and having opposing ends of the heel strap coupled proximate to the outer surface of the fabric at respective locations when the fabric is wrapped around the foot.

Claim 35 (Canceled)

Claim 36 (Currently Amended): A garment according to claim ~~35~~ 31, wherein the shank member is an inner shank, the garment further comprising an outer shank located over an outer surface of the fabric opposite the inner shank, and having a length and a width coextensive with the length and width of the inner shank.

Claim 37 (Currently Amended): A garment according to claim ~~35~~ 31, wherein the bladder comprises a width substantially coextensive with the length of the shank member and a length extending along a portion of the length of the fabric across the width of the shank member to an end of the fabric.

Claim 38 (Original): An impulse therapy garment for use in pump therapy for enhancing venous and arterial blood flow, the garment comprising:

a fabric comprising a length sufficient to wrap around an arch and dorsum of a foot along a path perpendicular to a length of the foot, and comprising a width substantially coextensive with a span between the ball and heel of the foot;

an inflatable bladder coupled to the fabric and configured to press against the arch of the foot when inflated, the inflation further configured to direct a force against the dorsum of the foot, the bladder further having a port hermetically coupled thereto for passing air to and from the bladder via a stem; and

a washer having a center hole locatable around the stem and configured to be forcibly retained against the outer surface of the fabric by snap-fit using annular stem protrusions extending from an external surface of the stem.

Claim 39 (Original): A garment according to claim 38, wherein the washer is forcibly retained against the outer surface of the fabric by snap-fit of the washer beneath the annular stem protrusions, a diameter of the stem protrusions being slightly larger than a diameter of the center hole.

Claim 40 (Original): A garment according to claim 38, wherein the washer further comprises annular grooves within an inside diameter of the center hole, the washer forcibly retained against the outer surface of the fabric by snap-fit of the annular stem protrusions within the annular grooves.

Claim 41 (Original): A garment according to claim 38, wherein a mating surface of a flange portion of the port facing the fabric comprises at least one radial rib protruding therefrom and configured to prevent rotational movement of the bladder about the stem and with respect to the fabric.

Claim 42 (Original): A garment according to claim 38, wherein a mating surface of a flange portion of the port facing the fabric comprises at least one concentric annular groove and a mating surface of the washer facing the fabric comprises at least one concentric annular protrusion corresponding to the at least one annular groove, the at least one concentric annular protrusion and at least one annular groove configured to entrap the fabric and the retained portion of the bladder therebetween to retain the bladder and to provide a seal between the port and the bladder.

Claim 43 (Original): A garment according to claim 38, further comprising a resilient shank member having a length substantially coextensive with the width of the fabric and a width substantially coextensive with a width of the foot, the shank member coupled to the fabric at a location sufficient to substantially lap the span.

Claim 44 (Original): A garment according to claim 43, wherein the bladder comprises a width substantially coextensive with the length of the shank member and a length extending along a portion of the length of the fabric across the width of the shank member to an end of the fabric.

Claim 45 (Original): A garment according to claim 43, wherein the shank member is an inner shank, the garment further comprising an outer shank located over an outer surface of the fabric opposite the inner shank, and having a length and a width coextensive with the length and width of the inner shank.

Claim 46 (Original): A garment according to claim 45, wherein the washer is coupled to the outer shank member using a neck.

Claim 47 (Original): A garment according to claim 38, further comprising a heel strap configured to be positioned around a back of the foot and having opposing ends of the heel strap coupled proximate to the outer surface of the fabric at respective locations when the fabric is wrapped around the foot.

Claims 48-53 (Canceled)